

AMENDMENT TO THE CLAIMS

Please **AMEND** claims 1 and 8 as follows.

Please **CANCEL** claims 15-20 without prejudice or disclaimer.

Please **ADD** claims 21-26 as follows.

A copy of all pending claims and a status of the claims is provided below.

1. (Currently Amended) A method of ~~combining a wide image mask and loop cutter~~
~~mask semiconductor fabrication~~, comprising the steps of:

forming a sidewall image transfer (SIT) loop on a substrate such that the SIT loop forms
a hard mask;

protecting a pair of critical edges of a the hard mask on a the substrate with a first portion
of a follow-on mask;

forming a wide-image mask on the substrate proximate the hard mask with a second
portion of the follow-on mask;

removing an exposed portion of the hard mask; and

exposing the pair of critical edges of the hard mask.

2. (Original) The method of claim 1, further comprising removing a portion of the hard
mask left exposed by the follow-on mask.

3. (Original) The method of claim 2, further comprising exposing the pair of critical
edges of the hard mask by removing the first portion of the follow-on mask.

4. (Original) The method of claim 3, further comprising exposing the pair of critical edges of the hard mask by etching the first portion of the follow-on mask from at least either a side or a top of the first portion of the follow-on mask.

5. (Original) The method of claim 4, further comprising removing a section of a sidewall of the second portion of the follow-on mask and then replacing a portion of the removed section of the sidewall of the second portion of the follow-on mask.

6. (Original) The method of claim 5, further comprising replacing a portion of the removed section of the sidewall of the second portion of the follow-on mask so that the second portion of the follow-on mask substantially aligns with a corresponding portion of a final shape.

7. (Original) The method of claim 1, further comprising sizing the first portion of the follow-on mask to protect the critical edges of the hard mask when the follow-on mask is mis-registered by less than a predetermined amount.

8. (Currently Amended) A method of ~~combining a wide-image mask and a loop-cutter mask~~semiconductor fabrication, comprising the steps of:

forming a sidewall image transfer (SIT) loop on a substrate such that the SIT loop forms a hard mask;

forming a follow-on mask in a loop-cutter pattern on a portion of a the hard mask, wherein the follow-on mask comprises a wide-image section and a narrow-image section;

removing a portion of the hard mask left exposed by the follow-on mask; and

removing at least a portion of the narrow-image section of the follow-on mask.

9. (Original) The method of claim 8, further comprising sizing the narrow-image section to cover a portion of the hard mask when the follow-on mask is mis-registered by less than a prescribed amount.

10. (Original) The method of claim 8, further comprising sizing the wide-image section of the follow-on mask to substantially align with a corresponding wide section of a final structure.

11. (Original) The method of claim 8, further comprising removing a portion of the hard mask left exposed by the follow-on mask.

12. (Original) The method of claim 8, further comprising removing at least a portion of the narrow-image section of the follow-on mask by etching the narrow-image section of the follow-on mask from at least either a side or a top of the narrow-image section of the follow-on mask.

13. (Original) The method of claim 12, further comprising forming a re-shaped follow-on mask by re-depositing material onto the wide-image section of the follow-on mask to substantially align the re-shaped follow-on mask with a corresponding portion of a final shape.

14. (Original) The method of claim 8, further comprising removing at least a portion of the narrow-image section of the follow-on mask by etching the narrow-image section of the follow-on mask from both a side and a top of the narrow-image section of the follow-on mask.

15. – 20 (Canceled)

21. (New) A method of combining a wide-image mask and loop-cutter mask, comprising the steps of:

forming a sidewall image transfer (SIT) hard mask loop on a substrate, wherein a narrow section of a target shape coincides with a portion of the hard mask loop and a wide section of the target shape overlaps the hard mask loop;

forming a follow-on mask over a portion of the hard mask loop, wherein the follow-on mask includes a first section corresponding to the wide section of the target shape and a second section corresponding to the narrow section of the target shape;

removing regions of the hard mask loop uncovered by the follow on mask;

etching the second section of the follow-on mask to expose underlying edges of the hard mask loop;

etching the first section of the follow-on mask to reduce its length and width to produce an image pad; and

etching the substrate uncovered by the remaining hard mask loop and image pad.

22. (New) The method of claim 21, wherein the etching the second section of the follow-on mask to expose underlying edges of the hard mask loop comprises completely removing the second section of the follow-on mask from the narrow section of the hard mask loop.

23. (New) The method of claim 22, wherein the SIT hard mask loop is formed using a non-photolithographic imaging technique.

24. (New) The method of claim 23, wherein the SIT hard mask loop is a few tens of nanometers wide.

25. (New) The method of claim 1, wherein the SIT loop is formed using a non-photolithographic imaging technique.

26. (New) The method of claim 25, wherein the SIT loop is a few tens of nanometers wide.